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or How to restore...

Calcutta

1895

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No. 1

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OR

HOW TO RESTORE ENGLAND'S LOSS

OF

£5,000,000,000?

BY

A. S. GHOSH, F. R. A. S.,
Professor of Economics and Mathematics, City College, Calcutta.

CALCUTTA:
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1895.

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PREFACE.

In venturing to place this little pamphlet before the people of England, I have been impelled by one only desire—to bring home to them that their industries are doomed to annihilation unless Englishmen awaken from their lethargy and take immediate steps to avert the imminent danger. That this is no false alarm may be gathered from the fact that English manufactures are steadily but surely being driven out of all Eastern countries, moreover that an attempt is being made to oust England even from those European markets where she has so long reigned without a rival. Not less anxious have I been regarding the perilous condition of Indian Finance, and if I have written to the advantage of England, it is only in the belief that if in her inordinate desire to profit by the Home Charges, she callously permits the Indian Administration to drift into bankruptcy, she will be guilty of the unpardonable folly of killing the goose that has hitherto laid the golden egg.

With great pleasure do I acknowledge my indebtedness to Mr. Robert Barclay, Chairman of the Executive Committee of the British Bimetallic League, for some valuable informations, which perhaps I could not have possibly obtained from a better source.

Calcutta,
26th April, 1895.

A. S. G.

WHAT IS BIMETALLISM?

INTRODUCTION AND EXPLANATION OF TERMS.

THIS is a question which we are all asking at the present day—some from pure intellectual inquisitiveness, some from a deep anxiety as to the depression of trade in England and the financial condition of India, and some yet perhaps from mere idle curiosity. Whatever then be the motive which prompts this inquiry, I have attempted to respond to it as best I may within the narrow compass of these leaves. Before however I enter upon a discussion into Bimetallism itself, it would be advisable to make some preliminary remarks so as to be sure of our basis of operations.

It is well known that the systems of coinage in different countries are not the same, for instance, whereas in England wealth is measured in terms of £. *s.* *d.*, in India it is reckoned in Rs. *a.* *p.* Moreover, in England the Pound Sterling, which is the *unit* chosen for the measurement of wealth (for the *s.* and *d.* are the sub-multiples of this unit), is in *Gold*, whereas the Indian *unit*, the Rupee, is in *Silver*. This is expressed by saying that the English **Standard of Coinage** is gold, and the Indian Standard is silver. Further, not only do the various countries of the world have different standards, but even those which have the same standard have not the same unit, *e. g.* England and Austria both have a gold standard, but whereas the English unit is a £, the Austrian unit is a *Franz-Josef*, a much smaller coin.

Nor even are the monetary laws of the world similar. In England any private person may go to the Mint with a mass of gold of the same fineness as the sovereign, and have it coined gratuitously; that is, he would get for every oz. of gold £3 and that fraction of it represented by 17*s.* 10½*d.*; in other words, he would get 623 sovereigns for every 160 oz. of gold (623 sovs. just weighing 160 oz.). Hence England is said to have a **Free Coinage** *for gold* (for there is no free

coinage in England for silver, as the Mint will not coin shillings with a private person's silver). Similarly, those countries have a Free Coinage, whose Mints are open to the public for the coinage of the standard coin.*

In India on the other hand there has been no free coinage since the last two years, when the Mints were closed to the public, the Government alone determining when to coin and what amount.

We now come to a consideration, which for our purpose is the most important, that relating to the **Legal Tender** of different countries.

Definition :— The Legal Tender for any country is that money of the country in which a debtor can compel a creditor to receive payment in discharge of his debt. For instance, in England the following constitute legal tender :— Sovereigns to any amount, and likewise Bank of England Notes (except for the Bank itself in payment of its own debts, *i. e.* the Bank cannot compel its creditors to receive Notes in payment of its own debts), silver up to 40*s.* and bronze up to 12*d.* In India the legal tender is :—Coined Rupees to

* In certain countries although the coinage is free in as much as the Government consents to coin a private man's metal into standard coins, yet it does not do so gratuitously, but makes a charge for it. This is usually done by putting less than the full weight of metal into the coin—the small difference (called a **seigniorage**) being taken by the Government. For instance the English Mint might take 160 oz. from a private person, and still give him 623 sovereigns in return, but use only 150 oz. in coining them—deducting the 10 oz. of gold as seigniorage; hence the sovereign would weigh $\frac{1}{15}$th less than in the former case. In consequence Free Coinage may be subdivided into gratuitous coinage and seigniorage coinage. It will be seen that where the former exists, *e. g.* England, a standard coin does not lose by the process of melting—except for the physical loss due to evaporation, etc.—since it may be re-coined at pleasure. But where the latter system is in use, the loss in melting is equal to the seigniorage, *e. g.* $\frac{1}{15}$th, as in the above illustration. Hence it is important to notice that in countries having a gratuitous coinage, the bullion in existence may in a short time be converted into an equal quantity of standard money, and thus affect the commercial equilibrium. I may therefore be permitted to say that in these countries, bullion, though not *kinetic* money (*i. e.* money actually in existence), may yet be considered to be *potential* money (*i. e.* convertible into actual money at any moment).

any amount, copper to the amount of 16 annas, and Currency Notes to any amount within the area of their issue (that is, Calcutta Notes are not legal tender in Bombay, or *vice versâ*); but Currency Notes are not legal tender *for the Government*, *i. e.* the Government cannot compel its creditors to receive Notes in payment of its own debts.

Now, it will be seen that speaking roughly the standard coin alone of any country is its legal tender. For Paper Money is only *Representative* Money, that is, standing in the place of an equivalent quantity of standard money actually held in existence (or supposed to be so) by those who issue the Paper. And the sub-multiples of the standard money, being legal tender for such small amounts, may be neglected, especially as there is no free coinage regarding them anywhere. We are therefore in a position now to define the subject-matter of our investigation :—

Those countries, which have a single standard (*e. g.* have either gold *or* silver as standard, but *not both*) and therefore a legal tender of a single metal (as explained above), are said to possess a **Monometallic Standard.** Those countries, on the other hand, which have a double standard (*e. g.* have both gold and silver as standard), allow free coinage of both the standard metals, and have both these metals in a **fixed ratio** as legal tender to any amount, are said to possess a **Bimetallic Standard.**

THE CHIEF FEATURES OF BIMETALLISM ANALYSED.

(1) *Two metals as standards of value.* This may be best illustrated by taking an analogous case. In England heat is measured by means of two kinds of thermometer, one (the Fahrenheit) is employed for the practical usages of daily life, and the other (the Centigrade) for theoretical and scientific calculations. In order to convert from the one system to the other, an equation exists between the two, *which is absolutely fixed and does not vary from day to day*—(*e. g.* Boiling point of water = 212° Fah. = 100° Cent. Freezing point = 32° Fah. = 0° Cent.) In like manner two metals may be used for the measurement of wealth, *so long as there is a fixed equation between them* (*e. g.* gold = $15\frac{1}{2}$ times its weight in silver, or in any other ratio whatever, so long as it is *fixed.*)

(2) *Free Coinage of both metals.* This follows from what has already been said, since both metals are standard. Of course free coinage might be either with a seigniorage or absolutely gratuitous, it does not matter which, *so long as it is the same for both metals.*

(3) **Both metals in a fixed ratio as legal tender to any amount.** This is by far the most important of the three features, in fact it includes the other two. It is of the very essence of Bimetallism, and it would be no exaggeration to say that this short sentence contains the whole theory in a nut-shell. A firm grasp of this fundamental principle is essential to a right understanding of the subject. But the fact itself is so simple that it is impossible to realize the difficulty of those who consider Bimetallism to be something mysterious and unknowable. The most ordinary illustration will suffice to make this clear. Let the ratio* of gold to silver in a Bimetallic country be as $15\frac{1}{2} : 1$; and let D, C, be a debtor and a creditor, respectively, in that country. Then D has the option of paying C either in gold or silver, or partly in gold and partly in silver—so long as he adheres to this equation between the two metals. In other words, for every oz. of gold of which his debt is composed, he ought to pay $15\frac{1}{2}$ oz. of silver, or *vice versâ*—both metals being of standard fineness. Again, if we suppose D to be the inhabitant of one country, and C of another, and both these countries to have the same Bimetallic ratio, then D has the option of paying C either in gold or silver, or partly in gold and partly in silver—so long as the legal ratio is adopted. The latter is an instance of International Bimetallism in its simplest form.

Thus far everything has been clear and indisputable. Before however we enter upon controversial grounds—the method and procedure of Bimetallism—it is better to give a preliminary sketch of the events which have culminated in the present state of affairs.

* Whatever the ratio may be, it must be sanctioned by law or custom, as otherwise the system would not work.

A SHORT HISTORY OF BIMETALLISM.

Let it not be supposed for a moment that the Bimetallic Theory in its elementary principles is a new-fangled idea, an untried experiment of economists, working in their solitary chambers, utterly unconscious of the actual monetary condition of the world. It is really as old as the hills—at least as old as King Solomon. One cannot do better than quote the researches of Professor Max Müller on this subject. Solomon meeting with the same difficulty that we do now, *viz.* the depreciation of silver and the disrupture of the trade with India (curious how History repeats itself!) acted wisely (in this respect History does *not* repeat itself!) and *performed an act of true Bimetallism* by consenting to receive taxes in either gold or silver, in spite of the depreciation of the latter metal, in a *fixed ratio, viz.* $13\frac{1}{2} : 1$. The silver thus obtained was sent to India (Ophir in the Bible) to buy precious stones, ivory, monkeys, peacocks, etc., as mentioned in the Book of Kings.

Without however going 3000 years back, we may safely say that the discovery of America is the first landmark in the history of Bimetallism. Every school-child knows that soon after the discovery of the silver mines of Potosi, whole fleets of Spanish galleons came home laden with silver, and flooded Europe with it. The act of filtration from Spain into the other States of Europe was performed in the ordinary course of trade, helped no doubt as regards England by the prowess and activity of Drake, Frobisher, and their valiant compeers. The enormous increase in the supply of silver as compared with gold during the 16th century may be judged from the fact that whereas the annual production of silver increased from £425,000 at the beginning of the century to £3,700,000 at the end, the annual production of gold during the same period increased from £800,000 to £1,000,000 only. Had such an enormous difference in the relative supply of the two metals taken place under the present system of gold monometallism, the value of silver with regard to gold would have come tumbling down and dwindled away to a vanishing point in "less than no time". They were wise however in those benighted days, and allowed free coinage of both metals, *both*

being legal tender in a fixed ratio. This ratio was 11 : 1 at the beginning of the century, but the great supply of silver led to its being 12 : 1 at the end of the century. Of course these rates were not fixed by international agreement, for the days of monetary conferences had not yet dawned, but were merely the algebraical averages of the different ratios prevailing in the different countries of Europe. It must however be mentioned that these various rates of the different countries of Europe were *very nearly equal*—in fact being identically the same within certain groups of States. It was obviously to the interest of these countries to have the rates as nearly the same as possible. For otherwise each country would have lost one or other of the two metals—except for the expense of transit—according to Gresham's Law.*

Throughout the 17th and 18th centuries the States of Europe remained bimetallic, though of course the rate could not remain the same for 200 years. In fact France in 1785 adopted by law a ratio of $15\frac{1}{2}$: 1, being the average of the rates prevailing in the capitals of Europe. This law was embodied in the Code Napoléon in 1803, and continued in full operation till 1873, *unaffected by the action of England in 1816 in demonetizing silver and making gold the sole standard, nor even shaken by the gold discoveries of Australia and California in 1849—51.* It will be remembered that after

* I shall show this by a simple illustration.
Let A, B, be two neighbouring countries, and let the rate in A be 16 : 1 (*i. e.* 1 oz. of gold=16 oz. of silver), but in B 15 : 1 (*i. e.* 1 oz. of gold=15 oz. of silver). Now a person in A, who has 240 oz. of silver, gets in exchange $\frac{240}{16}$ oz. of gold, or 15 oz. only. But if he went over to B, he would get in exchange $\frac{240}{15}$ oz. of gold, or 16 oz. Hence he gains 1 oz. of gold by taking 240 oz. of silver from A to B, and bringing back gold in exchange—except for the expense of transit. In this way A would lose her silver which would pour into B, and B would lose her gold which would pour into A. This is no other than the process in which the tropical seas discharge their warm water into the Polar seas by surface currents, and the Polar seas restore the equilibrium by discharging their cold water into the tropics by submarine currents—the primary cause of all this disturbance being the difference of temperature in the two regions, just as the cause of the shifting of the two metals between A and B was the difference of the bimetallic rates. Of course it need not be mentioned that if there were several countries in question a similar argument would apply to all.

the Napoleonic Wars, England desired to redeem her inconvertible paper money, and resume specie payment. Now the question arose, should she pay in gold or in silver, or in both? But such was the ignorance of monetary science in those days that her ministers believed that because silver had nearly disappeared from the country and gold alone was to be seen, therefore the people had really taken to gold as being more suitable—that in fact gold had practically become the sole standard of the country. In consequence Lord Liverpool's Act of 1816 made gold the sole standard, and demonetized silver. This Act was not only based on a false theory, but was moreover unjust. It was based on a false theory, because the disappearance of silver from England was simply due to the fact that the ratio between gold and silver in England was higher than that prevailing on the Continent; hence, in accordance with what has already been said about "Gresham's Law", England lost her silver and got gold instead. The Act was unjust because all existing debtors in England had contracted to pay their debts in gold or silver at pleasure, but now the law stepped in and compelled them to pay in gold alone—thus benefiting creditors at the expense of their debtors. Further, the National Debt of England, which in 1816 stood at the enormous sum of £876,000,000, had been raised under a bimetallic system, but the Act of 1816 simply compelled every tax-payer to redeem his share of the Debt (or to pay its annual interest) in gold alone—thus benefiting the holders of the Debt at the expense of the whole nation. Since this iniquity is still being perpetuated and will thus continue so long as a single farthing remains unpaid of the National Debt of England, it would only be an act of bare justice to her tax-payers to revert to bimetallism. But we shall refer to this later on (pp. 15, 17), and must now consider how France with her bimetallism was able to hold the balance between the group of silver countries on the one hand (for instance, the German States) and the gold countries on the other (for instance, England).

Let us suppose that silver was selling in England cheaper than at the French rate, say 16 of silver=1 of gold, instead of $15\frac{1}{2}$: 1 as in France. Then the consequence was, as explained before, that silver was taken away from England to

France, and gold brought back in its place. Hence silver became scarce in England, and gold abundant; and thus it was that the value of silver relative to gold rose again till the ratio stood at $15\frac{1}{2} : 1$. Similarly, if in Germany gold was selling cheaper than at the French rate, say 15 of silver = 1 of gold, then Germany would lose her gold and get silver in its place—thus causing a scarcity of gold and an abundance of silver—till the ratio stood at $15\frac{1}{2} : 1$ again. This clearly shows that a single powerful nation can maintain a bimetallic standard, and can practically cause her own ratio to reign supreme with her neighbours, so long as some of them have a gold standard, and some a silver standard. Of course France received considerable support from the formation of the Latin League in 1865. This was a bimetallic Union of France, Belgium, Italy, Switzerland and afterwards of Greece, with a ratio of $15\frac{1}{2} : 1$. This Union continued in full force till 1873, when a series of events of the utmost importance suspended its operations.

THE PRESENT MONOMETALLISM AND THE DEPRECIATION OF SILVER.

Immediately after the Franco-German War, Germany took advantage of the large amount of gold, taken from France as a part of the war indemnity, to adopt a gold standard. Now this increased demand for gold would in itself be sufficient to cause a great rise in the value of gold relative to silver—for be it remembered, Germany was hitherto a silver country. But added to this when she moreover abandoned her silver and threw it on the market of the world, silver began to fall rapidly in relation to gold. Hence this single act of Germany appreciated the value of gold relative to silver in two ways—one subjectively and the other objectively. As this point is much disputed by monometallists, I shall explain it more fully. It must be admitted as obvious that *a depreciation of silver relative to gold ≡ an appreciation of gold relative to silver*. And yet monometallists fail to see that the present depreciation of silver is really an appreciation of gold. Perhaps a rough analogy may illustrate this point vividly. Supposing X has 30 sheep and Y only 20,

then X is $1\frac{1}{2}$ times richer (in sheep) than Y. Now, if 10 sheep were taken away from Y, X would be 3 times as rich as Y. But moreover *if these 10 sheep were given to X, he would be four times as rich as Y*. Hence the relative position of X would be appreciated in two ways, (1) by an actual increase of 10 sheep, (2) by the loss sustained by Y. This illustrates the fact that the action of Germany appreciated the value of gold relative to silver in two ways:—
(*a*) by creating a demand for gold where none existed before;
(*b*) by abandoning an existing demand for silver.

The consequences of the conduct of Germany were immediate. She thought that her best plan was to convert all her loose silver into gold from her neighbours, the Latin League, at the rate of $15\frac{1}{2} : 1$. As it was considered too risky to do so directly, the silver was first sent to London and from there to France. But France understood the manœuvre, and realized that she was fast losing her gold, and moreover as she was no longer placed between a gold and a silver country as before, but wedged in between two powerful gold countries (England and Germany), she perceived that there would be no chance of attracting the gold back again. In consequence, the Latin League in self-defence ceased to coin silver freely, suspended their bimetallic system, and practically became gold monometallic countries. This further decreased the demand for silver, and therefore led to a further depreciation in its value in relation to gold. Since then other artificial causes have tended to increase the divergence between gold and silver, such as the redemption by the United States of Paper-money issued during the Civil War, the late attempt of Austria to have a gold standard, and the artificial demand for gold created by the formation of enormous War-chests* by all the armed Powers of Europe. Other events have only tended to accentuate the divergence—such as the desperate

* Germany, Russia, and Austria have War-chests of not less than an aggregate total of £120,000,000. They naturally prefer to have them all in gold, since Europe has now practically gold monometallism. The gold reserve of about £80,000,000 in the Bank of France is in reality a War-chest. Hence we have a grand total of about £200,000,000 worth of gold withdrawn from circulation in Europe alone! After this the blindest monometallist might see that these War-chests produce an artificial scarcity of gold.

attempt of the Indian Government to restore the Rupee by forbidding its free coinage. As we all know the only effect of this measure has been to stop one of the few demands there was for silver, and thereby to depreciate it still further.

THE PRESENT MONOMETALLISM PRODUCES UNSTABLE EQUILIBRIUM.

I should now wish to call upon the reader to mark this closely :—Since 1873 all the countries of the world have been monometallic, that is, have gold *or* silver as standard, but not both. Also—note the co-incidence—since that year a series of events have occurred which, related to one another in a chain of causation, have sent the two metals further and further from each other. Begun in the demonetization of silver by Germany, accentuated by the suspension of the Latin League, and almost brought to a climax by the conduct of the Indian Government, these causes have continued gaining in power, gathering forces from each effect. Each has been the effect of all that preceded it, and therefore has been in turn the joint cause of all that followed it—like a row of children's wooden bricks arranged in order, the first falling on the second, the second on the third, and so on till the motion is transmitted all along the line. So it seems that since the time we have had monometallism, the relationship between the two metals has been one of "unstable equilibrium."* On the other hand it has been shown already that before 1873 the bimetallism of the Latin League was well able to maintain a "stable equilibrium"† between the two metals. For, if there happened to be any divergence from the fixed ratio of $15\frac{1}{2} : 1$,

* A body is said to be in a state of unstable equilibrium, when it is so supported that if any force produces a divergence from its position of equilibrium, immediately and *ipso facto* some other force or forces will be set in motion causing a still further divergence; *e.g.* a stick supported vertically on the ground is in a state of unstable equilibrium, because if any force, say a touch of the hand on the top, causes it to diverge from its position of equilibrium, the force of gravity will cause it to diverge still further, till it falls on the ground.

† A body is said to be in a state of stable equilibrium when it is so supported that if any force produces a divergence from its position of equilibrium, immediately and *ipso facto* some other force

forces were brought into operation which restored that ratio. But this is by the way. Let us see what the present state of things mean.

THE CAUSES OF THE DEPRECIATION OF SILVER EXAMINED.

Since the last twenty-two years, the value of silver in relation to gold has fallen by nearly 50 per cent., *i. e.* whereas formerly it took $15\frac{1}{2}$ oz. of silver to buy 1 oz. of gold, it now takes about 30 oz. of silver to buy 1 oz. of gold. In those happy days Rs 10 were sufficient to buy £1, but now it takes about Rs 19. Hence the question is, what can be the cause or causes of this depreciation of silver, of this appreciation of gold, or if you prefer it we shall not quarrel about phrases and say 'of this divergence between gold and silver'. Monometallists swear that gold has done nothing, that it is perfectly innocent, and lay the whole blame upon silver. That, they say, is the true culprit, that it has fallen by its own fault, by being *produced too much*—but gold has remained exactly where it was. Bimetallists on the other hand maintain that a little more or less production of either metal cannot affect the total stock of the world, and that the sole cause of all this disturbance is the artificial increase in the demand for gold, and the corresponding decrease in the demand for silver—in other words that the relative *supply** of both metals has not altered, but the relative *demand* has. Now it is easy enough to decide between the parties, as to

or forces will be set in motion causing a restoration of that position of equilibrium. A suspended pendulum gives us a good illustration, for if the knob were sent aside by a blow of the hand, it would immediately fly back (by the force of gravity) towards its position of equilibrium, and after a few oscillations come to rest there again.

* Of course 'supply' here means 'what is actually in existence' (*i. e.* 'the total stock') and not 'the annual increase in the supply' (*i. e.* 'the yearly output from the mines'). I have used the word 'supply' rather than 'stock' merely to emphasize the fact that the whole thing is really governed by the law of Supply and Demand. It seems to me that monometallists have brought much confusion into the discussion by using the word 'supply' ambiguously. When employed, to mean 'the yearly output from the mines', it is not that 'supply' which economists imply in the law of Supply and Demand.

which is right and which is wrong. Bimetallists say that the supply of gold is about where it was before, but that there has been an artificial increase in its demand by countries like Germany, Austria, etc. If this be the case, then we would naturally expect a scarcity of gold in these and all other countries having a gold standard—for the same quantity of gold would now be wanted by more people—and in consequence a fall in the prices of commodities in general in those countries, because more commodities would now be competing against the same quantity of money. But this is exactly what has taken place, *viz.* a fall in the prices of commodities in general in countries having a gold standard. This will be proved presently. Again, bimetallists say that silver has stood nearly where it was before, that it has not been over-produced. Now if this is the case we should expect to see much the same quantity of silver as before in countries having a silver standard, such as India, China, Japan, etc., except that the silver, displaced by gold in Europe, might have found its way into these countries—in consequence we would expect that the prices of commodities in general (except of those commodities which are imported from gold countries) would remain unchanged. Now we all know that this is exactly the case, for in India we see that the general prices of those things which are produced in the country, such as rice, wheat, tea, oils, jute, etc., are not affected by exchange, *i. e.* have not risen, or rather if they have risen a little it is due to the comparatively small quantity of extra silver, which displaced in Europe has come into the country.* As for the increase in the annual production of silver in recent years, it has been partly absorbed in the arts, and partly used for the great expansion of trade in India, Japan, etc., which has been going on since the last 20 or 30 years.

If monometallists be right when they say that the sole cause of the present disturbance is the over-production of silver, then the stock of silver in the world should have been

* Of course a small percentage of this increase (if any) may be due to the fact that the present fall in silver offers a bounty to the Indian exporter of these commodities to gold countries, and consequently induces him to sell his goods to the foreigner rather than to the home consumer—thereby raising prices at home.

doubled since 1873—the stock of gold remaining much the same—to have produced a fall in silver within that period by half! Now if we remember that there is not less than 3,700,000,000 oz. of silver in the world—the result of the accumulation of many centuries—the hopeless absurdity of such a supposition is obvious. Besides, if it were true, prices of commodities in silver countries would have been doubled in this period, which we know is not true. Hence, it must be admitted that bimetallists are right when they say that there has been no over-production of silver, because prices have not risen in silver countries; and if they can prove, as stated already, that general prices have fallen in gold countries, then we must believe them when they say that there has been an artificial increase in the demand for gold in those countries. In other words, in order to show that their version of the cause of the present divergence between the two metals is true (*viz.* that it is really due to the conduct of Governments) it only remains for them to prove that the prices of commodities in general have fallen in gold countries. This is easily done by employing the **index number**.* I shall take the case of England, as being the best illustration of a country having a gold standard:—The first valuation was made in 1850 when it was of course 2200 for 22 articles. For 14 years there was a fluctuating rise, till in 1864 it stood at 3787, that is, 72 per cent higher than in 1850. This enormous rise was partly due to the great gold discoveries raising prices, but more largely due to the American Civil War making things dearer, especially raw cotton. Then there was an oscillating fall, till in 1871 it was 2590—this was no doubt due to the ending of the War and the formation of the Latin League, which helped to restore the equilibrium. After that a period of inflation of prices occurred, due to commercial speculation, and the numbers were 2835 in the year 1872, and 2947 in the year 1873. In that year as already explained, the present gold monometallism of Europe began with the demonetization of silver by Germany and the suspension of the Latin League. In consequence general prices commenced to fall steadily, and have thus continued ever since. This is obvious from the index number incessantly decreasing to 2023 in 1886, and still lower and lower to 1386 last year. [* *See* APPENDIX.]

THE DEPRECIATION OF SILVER IS REALLY AN ARTIFICIAL APPRECIATION OF GOLD CAUSED BY THE CONDUCT OF GOVERNMENTS.

So bimetallists' version of the story is correct, since general prices *have* fallen in England, and similarly in other gold countries. Of course, monometallists have tried to explain away the phenomenon by saying in a half-hearted way that it is not due to an artificial increase in the demand for gold caused by the conduct of Governments, but that prices have fallen simply owing to great inventions lessening the cost of production of articles in general. Now, I confess my ignorance and admit I have never heard of such wonderful inventions taking place since 1873, which have halved the cost of production of things in general. Of course we all know the magnificent inventions of the latter half of the last century which revolutionized industry—I mean Watt's steam-engine in 1769, Arkwright's water-frame in 1769, Hargreaves' spinning-jenny in 1770, Crompton's mule in 1779, Cartwright's power-loom in 1785, the smelting of iron by pit-coal and the use of the steam-engine to blast furnaces in 1788—finally the lessening in the cost of transit effected at the end of the last and at the beginning of the present century, by steam-navigation, railroads, the canal system, macadam roads, etc. All these every school-child knows, but where the miracle-working industrial inventions since 1873 come in, I am too blind to see. Beaten from their ground, but nothing daunted, monometallists say with the utmost *sangfroid*, "Well you see, all this fall in prices is simply due to the general over-production of commodities." What lazy people these monometallists are! They ascribe every evil under the sun to the over-production of something or other. Their ideal is to lie in bed of a morning and swear that the world is suffering from the effects of far too much work already, and that they must fulfil their noble mission of showing people the error of their ways by encouraging them to do nothing. But every economist has taught that although over-production of single commodities may take place, there can never be an over-production of all commodities in general, for this would simply mean that there was an absolute

maximum limit to human desires, which is obviously false. Hence to sum up our arguments on this point, let it be understood once for all that the present divergence between gold and silver is nothing more than *an artificial appreciation of gold caused by the conduct of Governments.*

It may however be objected that a fall in general prices is rather a blessing to a nation, and therefore England and all other gold countries should continue in their present gold monometallism. That this is a sad mistake, may be proved easily. Falling prices entail a continuous loss on all producers, discourage production, and thereby cause a depression of trade. Of course consumers gain at first by falling prices, but since all consumers are also producers of some commodity or other, and since the fall is general, their trades are also depressed; in other words, the stagnation in trade is general. This is exactly what England and all other gold countries are now suffering from. Moreover, as already explained, falling prices benefit creditors at the expense of debtors, and sleeping-partners at the expense of active-partners, which is both unjust and impolitic. Be it remembered that since creditors are benefited at the expense of their debtors, the creditors of the nation (*i. e.* the holders of Consols) profit at the cost of their debtors (*i. e.* the tax-payers). It is not too much to say that the whole burden of the National Debt of England has been increased far more heavily by this fall in prices than by the long and expensive Napoleonic War. It may be asked that if the present state of things be such an obvious evil, why does England retain it? In answer one may well ask the counter question, "if the decimal system of measurement be incomparably superior to the present antiquated method employed in England, why does she alone still stick to the latter, when the whole civilized world have agreed in abandoning it?" These things are unaccountable, and can be but faintly ascribed to England's notion of the "eternal fitness of things." She had nothing to do with the Gregorian Correction of the Calendar for a long time, and even pooh-poohed the idea of the Suez Canal. But this is by the way. It has been suggested that the sole reason, why England wishes to retain the present state of affairs, is that she is the great creditor nation of the world, that every nation is more or less

her debtor, and consequently she now benefits at the expense of the whole world. But "a doctrine more crude in its conception or more reprehensible in its morality" is simply inconceivable, and I refuse to believe that any British Minister could ever have dreamt of it. Be it noticed that a creditor in trying to gain too much may lose all, if his debtor becomes bankrupt—as England has already found to her cost in the case of loans advanced to Argentina and other South American Republics. Let it then be admitted that the present artificial appreciation of gold *is* an evil.

THE CHIEF FEATURES OF THE PRESENT EVIL SUMMED UP.

Let us clearly understand the extent of the present evil. I shall sum up the chief features :—

(1) Money being scarce in all countries having a gold standard, the general level of prices has been falling since 1873. Now prices being only the *money-value* of commodities, a fall in prices, due to scarcity of money, does not really benefit consumers, because it is proportionately more difficult to get money. Things may be now bought with less money—*i. e.* things may be cheaper in money-value—but that very money is proportionately more difficult to acquire. Hence the position of consumers is neither better nor worse than before. Of course if the fall in prices had been due to inventions or any other decrease in the cost of production, then the cost of acquisition would have been lessened, *i. e.* the consideration (measured in labour), which a consumer must offer in order to acquire commodities, would have been lessened; and therefore he would really have been benefited. We have however already seen that the fall in prices is not due to inventions but to the scarcity of money; therefore, to repeat once more, consumers are not benefited. On the other hand, as explained above, all producers are injured by the general depression of trade; therefore the whole community is injured in its corporate capacity of producers, and not benefited in its corporate capacity of consumers—*i. e. the whole community in general is injured in the long run.*

(2) Falling prices have benefited creditors at the expense of their debtors. This is obviously unjust, and the

extent of this injustice may be measured from the fact that in England at the present moment loans on mortgages alone amount to not less than £2,700,000,000. Let us suppose that the fall in prices has been only 40 per cent. It has been much more, but even at this rate the total loss to debtors in England comes up to £1,800,000,000 !* It is the same in other gold countries. It is impolitic to allow this state of things to continue, because it is better to encourage debtors rather than creditors, since the former represent the active portion of the community, and the latter only the sleeping portion. Again, falling prices have benefited the creditors of the nation, *i. e.* the holders of the National Debt, at the expense of the whole tax-paying community. Let us show the total loss to Englishmen by this fall in prices in a tabular form :—

AMOUNT OF DEBT in *millions* of £.		LOSS at 66⅔ per cent. in *millions* of £.
Mortgages	=2,700	1,800
National Debt	= 700	466⅔
Railway Bonds and Preference Shares	= 500	333⅓
Local and Municipal Debts	= 160	106⅔
Rents on long leases, Pensions, and other Annuities, the whole capitalized on land at 27 years purchase	= 4000	2,666⅔
	Total Debt =8,060	Total Loss=5,373⅓

* A fall of 40 per cent. in prices brings a loss of 66⅔ per cent. on the debt. For, let us consider wheat to represent commodities in general, and a sack containing a given quantity to be the unit of measurement. Also, let us suppose that you have promised to pay me £100 at a time when a sack of wheat was selling for £1, *i. e.* that you really promised to pay me 100 sacks of wheat. But suppose that prices have now fallen 40 per cent., *i. e.* 100 sacks are now worth £60 only. Hence we find (by Rule of Three) that £100 at present will buy 166⅔ sacks. If you therefore now give me £100 to discharge your debt, you pay me 166⅔ sacks instead of the 100 sacks you promised; hence you lose 66⅔ sacks on the 100 sacks you promised, *i. e.* you lose 66⅔ per cent. on your debt.

So the total loss to Englishmen may be estimated by something more than £5,000,000,000, that is, by about half the aggregate property of the country! Of course this amount lost by Englishmen who are debtors and tax-payers is gained by Englishmen who are creditors and annuitants. Hence it may be argued that this enormous loss is only a transference of wealth from one portion of the British nation to another portion of the same nation, and therefore is not a *national* loss, because nothing goes out of the country to foreigners. But what a monstrous and immoral principle this is! If such a doctrine were permissible, then why not repudiate the National Debt of the country, and cancel the debts of all Englishmen who are indebted to their own countrymen? This is a much simpler plan of redeeming the National Debt than those invented by English Ministers, *viz.*, Sinking Funds, Terminable Annuities, etc.! And at the same time by benefiting debtors, who represent the active portion of the community at the expense of their creditors, who represent the sleeping portion, it would give a fresh impetus to all industrial enterprise! But this principle is not only wicked but also based upon false economics, for the loss on one side is very much greater than the gain on the other, hence the nation *does* lose on the whole. I shall try to make this clear by an illustration. Let us suppose that two Englishmen, A and B, have just £100 each. Now if we take £5 from B and give to A, will the loss of B be made up by the gain of A, as far as the whole national wealth of England is concerned? Not at all! For the loss of B may be measured by the ratio $\frac{5}{100-5}$, whereas the gain of A may be measured by $\frac{5}{100+5}$; hence the loss of B is greater than the gain of A, and therefore the nation *does* lose on the whole. How much more would this be so, if we consider A, who represents the creditor portion of the nation, to be richer than B, say, twice as rich. Then the loss of $B = \frac{5}{100-5}$, and the gain of $A = \frac{5}{200+5}$ only. But this is enough, for it only manifests the crass ignorance, the insane folly, of a large number of people in

England to permit themselves to be so easily cheated—nay, one may rather say that it reveals the cool calculating scheme of some to defraud their weak and ignorant countrymen. The members of Parliament no doubt attain a very great honour by their high position, but do they always remember that they have also a duty to perform—to see that their culpable negligence does not bring unmerited loss upon their weaker countrymen?

(3) The present artificial appreciation of gold has produced a depreciation of silver, and has brought down the exchange value of the Rupee from 2*s.* to about 13*d.* Let us see what this means for India. We may dismiss as a mere trifle the loss incurred by private people in sending remittances to England, as compared with the heavy burden on the Indian Government of paying the annual "Home Charges." As far as I know, and I write under correction, these Charges consist of the pension of retired English Civil and Military employés of the Government, the interest on the Gold Debt of India raised in England, the cost of maintaining the India Office in London and the British fleet in Indian waters, and lastly, the cost of certain diplomatic affairs which lie on the fine borderland between the Indian and the Imperial, but which are always tending to gravitate towards the regions of the latter. The Charges amount to about £19,000,000 annually, which sum at 13*d.* per R is equal to about Rs 350,000,000—*i. e.* Rs 160,000,000 more than at the former rate! Hence the embarrassment to the Indian Government, and the annual loss to the tax-payers of India may be measured by this amount.

(4) **The present condition of things is ruining British industry.** I shall not say much about the depression of English agriculture brought on by the competition of wheat imported from silver countries. This hardship to British farmers is no doubt great, but greater still is the appalling calamity which has already begun to overtake all British textile industries. The people of silver countries no longer care to buy English goods when they have to pay nearly twice as much as before. For every English article worth £1, an Indian importer has now to pay Rs 19 instead of Rs 10, as before. Under these conditions he buys

as little of English goods as possible, and prefers to patronize the cheaper though inferior goods made in India. Moreover the Indian Government has been compelled to levy a tax on all imports in order to avert bankruptcy, and has thereby still further decreased the demand for English goods.

There is another impending evil against which England would do well to guard herself. All the evils I have mentioned hitherto may yet be remedied by the plan which shall be proposed later on, but there is another consequence of the present condition of things which may soon become too late to prevent. England at the present moment reigns supreme in the manufacturing industries of the world, but does she wish that the sceptre should pass from her to Japan and China in less than fifty years? Chinese and Japanese labourers can work with ridiculously cheap wages, are frugal, clever, and above all are practically unlimited in number. They only want the machinery and the management to smash up the industries of Europe. The former they are getting from Europe or will soon make for themselves, the latter they have at home, for Japan has just proved in the late war that she has many men endowed with the power of organization. These countries would never have thought of developing their industries had they not found that, owing to the appreciation of gold, it was cheaper to make goods at home than to import them from gold countries. They have made gigantic strides already in developing their industries, and it is not too much to say that unless the present monometallism ceases immediately, they will become the centre of the world's industry in the near future.

India has also made very great progress in this way, except that the mad act of her Government in closing her mints has diminished the demand for her goods from China and Japan. I have said in the beginning of this pamphlet that the Indian Standard of coinage is silver, but to be more accurate I should have said that since the closing of the mints, the standard is neither gold nor silver, but like Mohamet's coffin hangs between the two. The standard is something non-existent, something imaginative, something which has been revealed to its founder by præternatural beings. In fact the Rupee is only a huge token coin, with a

gold standard never visible to the people of India and perhaps only once visible to the originator in a hideous night-mare which he mistook for a glorious inspiration. Of course this act of madness has lowered the bullion value of the Rupee more than its face value, and therefore has appreciated the Rupee for those countries which have a free silver coinage, *e. g.*, China and Japan. In consequence China and Japan cannot have Indian goods, just as India cannot have English goods, except by paying more than before. Hence to sum up, we have this magnificent result that English goods are shut out of all silver countries, and Indian goods are shut out of those silver countries which have a free coinage, *e. g.* China and Japan. In other words, the only permanent gainers are China and Japan—being self-governed countries and not politically dependent like India.

THE REMEDY IS INTERNATIONAL BIMETALLISM.

The remedy for all these evils is simply International Bimetallism, which may be brought about by the most important nations of the world enacting by an international agreement that from a certain future date **both gold and silver shall be legal tender to any amount in a fixed ratio**. What that ratio is to be, and how such an enactment may be carried out, we shall see presently. I must first show that the effects of such an agreement will be :—

THE EFFECTS OF INTERNATIONAL BIMETALLISM.

(1) *To restore the level of general prices in gold countries.* For, at present gold alone is money; but if gold and silver were both money, it would obviousiy be more plentiful in those countries, and thus the level of general prices be restored, and consequently as shown above the whole community would gain in the long run.

(2) *To put an end to the great injustice that is now being done to all debtors in gold countries.* This easily follows from (1). It might however be objected that at first the vested interests of creditors would suffer, in as much as they would be compelled to give up a gain which they have come to look upon as permanent. But if it is not wrong to

restore ill-gotten goods, surely it is justifiable and even obligatory to give back an "unearned gain" to those at whose expense it was acquired. Surely debtors have suffered long enough and it is time to give them an innings. Hitherto it has been a case of every creditor saying to his debtor, "heads I win, tails you lose," and not that of a mere wagering contract in which, as Lord Justice Henry Hawkins of popular and immortal fame has laid down, *both* parties stand to gain *or* lose. Such an international agreement would only ensure that for the future no such injustice shall take place, and for existing debts, whether private or national, creditors must relinquish a part of their unearned gain.

But it is honestly objected that if debtors had the option of paying their debts in either metal (in a fixed ratio) they would all naturally elect to pay in silver, which is the depreciated metal; hence all creditors would lose. Now monometallists in bringing forward this argument commit two serious blunders:—(*a*) They quietly assume that the ratio fixed must be such as to be more advantageous to pay in silver than in gold. What that ratio may be, however favourable for gold you may choose to make it (say 1 oz. of gold = 30 oz. of silver), it does not matter as far as the *Science of Bimetallism* is concerned, so long as the ratio is FIXED. Hence creditors need not lose at all in this way. (*b*) Even if the ratio were to be fixed somewhere near what it was in the Latin League ($15\frac{1}{2}$: 1), and consequently even if the ratio fixed were to be more favourable for silver than the present market rate, monometallists forget that this very action of all debtors to pay in silver would cause them to make a rush for silver and leave gold severely alone. What would be the effect of such an action? Why, the market value of gold would come down flat and that of silver shoot up till the legal fixed ratio were reached.* And of

* It must be noted that almost every person is a debtor to somebody or other, and that many creditors themselves are simultaneously debtors to other creditors, and so on we find that almost the whole world is a mass of debtors. Moreover be it remembered that we *seek* money only in the capacity of debtors, but never in the capacity of creditors, for as the former we have to *pay*, and as the latter to *receive*. Hence the magnitude of this rush for silver may be imagined!

course *vice versâ*, if gold happens to be depreciated below the legal rate, all debtors would rush for gold and thus restore its position. This **Compensatory Action** is one more illustration of the stable equilibrium of Bimetallism, for here we see again that if any cause produces a divergence between the market and the legal rates of the two metals, immediately and *ipso facto* forces will be set into motion which would reconcile the two rates. The invincible determination of monometallists not to realize the admirable powers of this compensatory action of Bimetallism is simply astounding. Seas of ink have been uselessly spilt in the controversy over this simple little truth, so obvious to all who are not blinded by the prejudice of vested interests.*

(3) *To steady the fluctuations of exchange.* How many Indian importers there are at the present day who can form no estimate of the extent of their obligations, nor even whether they are solvent or bankrupt, such are the fluctuations of exchange between India and England. The effect then of an international agreement causing both metals to be legal tender in a fixed ratio (which ratio of course must be the same for all the countries comprised in the bimetallic union) would be to make all these countries practically one country for the purposes of exchange; hence in such a case the compensatory action mentioned in the last section would cause the rate of exchange between any two countries of the union to be maintained in a position of stable equilibrium in close proximity to the legal rate.

(4) *To restore and even to improve trade between silver and gold countries.* At present the East and the West are being driven further and further from each other, because the former uses only silver and the latter only gold. It is therefore

* This simple principle is a beautiful illustration of the self-adjusting capacity of economic forces—nay, it is but a small fragment in the mass of evidence which will probably be gathered together at a not distant period to show that every law both in the material and in the intellectual world is but a particular and an infinitesimal enunciation of that one grand law of the created universe, which for the want of a better name we may call the law of "Conservation of Energy"—understanding energy not merely in the physical and mathematical sense, but also in the moral and incorporeal order of things.

becoming impossible for them to carry on their commerce without serious loss to one of them. The East cannot do without the manufactures of the West, and the West cannot do without the food-supplies and raw materials of the East. It would consequently be to the interest of both to restore the former position of silver.

(5) **To save English industries from an impending ruin.** At present English goods are practically shut out of silver countries solely owing to the divergence between gold and silver, and therefore we have only to remove the cause in order to re-open the activity of English importation into silver countries. But if England delays much longer, China and Japan will develop their industries and not only cut out England from the Eastern world, but may even drive her out of European markets.

(6) *To save the Indian Government from impending bankruptcy, and consequently the whole British Empire from an imminent calamity.* The position of the Indian Government is becoming more embarrassing every year, as it is becoming more difficult to pay the annual Home Charges. The great problem which is now puzzling the administration —and many others besides—is "how to raise the wind." The limits of safe taxation have been reached long ago, and the desperate nature of the disease may be diagnosed from the desperate attempt which the Government made in 1893 to clutch at the "vanishing rupee." It is needless to mention that the only result of the closing of the mints was to depreciate the rupee still further—in accordance with what has been already said about the unstable equilibrium of the present system. It may well be imagined what would happen if the administration *did* go bankrupt, if we take into account the fact that India is not only the best market which English producers have, but that on her government depends the prestige of England before the world. Not only however may this catastrophe be averted, but the sorrows of the Government and tax-payers of India turned even into joy by International Bimetallism. It has already been said that the Government in remitting the Charges at the present moment has to pay annually Rs 160,000,000 more than what she would have to pay were the Rupee still equal to 2*s*.

How much of this huge amount might be saved were bimetallism introduced, and consequently what proportion of our heavy burden of woe—I mean the income-tax, the import-duties, the salt-tax, and the opium-tax—might be lightened, our careful and economical Financial Minister could tell us. I am sure he will not deny us the joyous sensation of knowing the magnitude of this possible happiness.

AN OBJECTION.

Monometallists have always delighted in bringing forward the argument in favour of gold that it is far superior to silver in performing the functions of money, in as much as it is more durable, and carries a greater value in a smaller bulk. Now all this is very true, and if the world were to start afresh I do not suppose anybody would have a word to say against gold being made the sole standard of value, the sole money. Unfortunately however the world has already been in existence for a very long time, and such is the perversity of human nature that nearly half the world will insist upon using gold alone, and more than half—at least the whole of Asia and a great part of America—will insist upon using silver alone. Being eminently practical, bimetallists do not dream dreams and sigh for what might have been, but take the world as it is and try to reform the abuses of existing systems. Their aim is to reconcile gold and silver groups of countries, which are drifting further and further from each other, and to show that each is essential to the happiness of the other.

HOW INTERNATIONAL BIMETALLISM MAY BE BROUGHT ABOUT.

We have finally to consider how the most important nations of the world may agree by an International Congress to enact that from a certain future date *both gold and silver shall be legal tender to any amount in a fixed ratio.* A good method of bringing about such a thing would be to let each of these countries choose a gold coin and a silver coin, such that the mutual relationship (both intrinsically and legally) between these two coins shall be equal to the

ratio fixed. Let us take an example. Suppose the gold coin chosen by England is called the Sovereign, and the silver coin the Shilling; let the ratio fixed be $r : 1$. Then the English Parliament must pass a law that 1 Sovereign shall exchange with r Shillings, and the Government shall take care that such a proportion of metals of standard fineness is put into the respective coins that this relationship shall be true intrinsically—*i. e.* the Sovereign and the Shilling shall be just equal in weight, for in that case a certain quantity of gold would just be equal to r times that quantity of silver. Parliament must also enact that there shall be free coinage of both these coins, and that both shall be legal tender to any amount—for instance, if you owe me 4 Sovereigns, you are at liberty to pay me in any of the following ways, (1) 4 Sovs. (2) $4r$ Shillings, (3) 2 Sovs. $+2r$ Shillings, (4) 1 Sov. $+3r$ Shillings etc. Similarly, each of the other countries must choose a gold coin and a silver coin, such that both intrinsically and legally they shall be in the ratio of $r : 1$, allow free coinage of both coins, and make both legal tender to any amount.

Of course all these countries need not choose identically the same gold and silver coins; each may select *any* two coins she pleases, so long as the *ratio* between them is the common fixed ratio.* Hence there will always be a fixed **par of exchange**† for all these countries. It would however be of the utmost advantage for all the countries of the union to have the same identical gold and silver coins, for then not only would the par of exchange be invariable, but moreover all these countries would be practically one country for *every* purpose of commerce. But let it be understood that though advisable, this identity of coins is not essential to international bimetallism.

A still simpler plan, and one involving the least possible change from existing conditions is the following:—Let a law

* It is obvious arithmetically that there may be many pairs of quantities, all different and yet such that the ratio between the two numbers composing each may be the same for all:—

$$\tfrac{1}{2}=\tfrac{3}{6}=\tfrac{4}{8}=\tfrac{5}{10}, \text{ etc.}$$

† By the par of exchange is meant that quantity of money of one country which is intrinsically equal to that of another.

be passed in England that after a certain date anybody bringing silver of standard fineness to the Mint will receive in exchange Bank of England Notes in the proportion of £623 worth of Notes for every $160r$ oz. of silver, *i. e.* one £5 Note for every $\frac{5 \times 160r}{623}$ oz. of silver. Also, let it be enacted that anybody taking Notes to the Bank will have the option of receiving sovereigns, or bar-silver in the above proportion. Similarly, let a law be passed in India that anyone, bringing gold of standard fineness, will receive in exchange Currency Notes worth r number of **Rs** for every tola of gold—the present Rupee just weighing one tola; moreover anybody taking Currency Notes will have the option of receiving coined **Rs**, or bar-gold in the above proportion. And in like manner in the other countries. It must of course be observed that the reserves, which must be held by Governments, should be kept in both metals in *about* the same proportion as $r : 1$.

THE INITIAL TROUBLE OF MAKING THE CHANGE.

The change from existing conditions to that involving two new coins may be supposed to entail some initial trouble and expense, which however may be reduced to a minimum by judiciously selecting the coins. For instance, the same *names*, which are used at present, may be retained, so as not to confuse the uneducated portion of the community. Moreover, once we admit the great advantages of a system, it would surely be cowardice to hold back simply for fear of the initial trouble of making a change. In this respect the position of England is inexplicable. The most enlightened nation of the world in many respects, and immeasurably so in political and commercial matters, she has yet been ever afraid of adopting the decimal system of measurement, because of the initial bother. Her position is as illogical as that of the person who will rather endure the agony of a terrible toothache than bear the momentary wrench which would draw out the afflicting tooth. But all the civilized nations of the world have borne the pain of drawing out their bad teeth—I mean they have undergone the initial trouble of

adopting the decimal system and many other social improvements besides, such as compulsory education, state insurance, etc.; then surely it is not in accordance with the dignity of England to be alone in pleading such an excuse. Hence I doubt not that England will not only consent to bear the little trouble of this change—that even the most illiterate will not cry out "Give us back our 'bob' and 'tanner'!" or whatsoever coin it be that disappears—but that she will even seize this opportunity of establishing the decimal system as well.

THE FIXED RATIO: "WHAT SHALL IT BE?"

We have truly come at last to the vale of tears, to the land of woes and sighs, to the land of exterior darkness where there is weeping and gnashing of teeth. This is the very ring in which the two parties have hitherto fought like the historic cats of Kilkenny which "jumped down each other's throat" in their colossal ferocity. Driven from corner to corner, monometallists have formed their last line of defence behind this question, hoping with the hope born of despair that at last they have found a barricade proof against the terrible sledge-hammer blows of bimetallists. But is this question after all unanswerable? It has already been shown that no matter at what point the ratio may be fixed, the *compensatory action* of bimetallism would apply in every case. Hence at what particular point the ratio is to be fixed, is not a question of vital importance as far as the science of bimetallism is concerned. It is however argued that since bimetallists are the plaintiffs in this ejectment-suit in which the defendants are the monometallists, the burden is cast upon the former of mentioning a ratio, but as a *practical scheme* only. This I shall venture to do cheerfully, but with this clear understanding that if I fail in the attempt you may laugh at me as much as ever you please, but you must not blame the theory of bimetallism. Supposing I were vain enough to attempt to build a bridge, with the very natural result that it comes down in the very first storm, then you are at liberty to call me as many names as you please, but you should not say that therefore the science of engineering must be false. Now for the ratio:—

Take all the gold which at present exists in the world, either as coins or as bullion, and place it in one heap; take all the silver, which at present exists in the world, either as coins or as bullion, and place it in another heap. Now it is obvious to every student of Economics that, in order to find the natural value of gold and silver relative to each other, we have only to suppose the one heap to exchange with the other, *i. e.* as regards *mutual value*, the heap of gold = the heap of silver. Hence to find the natural ratio between the two metals, we have only to divide the weight of one heap by that of the other. Now let us put the above obvious rule into practice. Calculating very roughly, there are at present about

242,000,000 oz. of gold,

3,700,000,000 oz. of silver.

$\therefore$ 242,000,000 oz. of gold = 3,700,000,000 oz. of silver.

$$\therefore \quad 1 \text{ oz. of gold} = \frac{3{,}700{,}000{,}000}{242{,}000{,}000} \text{ oz. of silver.}$$

$$= 15{\cdot}29 \text{ oz. of silver } \textit{nearly}.$$

This then is the natural ratio, or say $15\frac{1}{2} : 1$, to be in accordance with the rate so long prevailing in Europe from 1785 to 1873. This simple arithmetical result may stagger monometallists who are blinded by the present artificial ratio of 30 : 1. They cannot realize that what exists at present *is* artificial, and that if things were free, the ratio would come down nearly by half. Their position however may easily be explained. We have sometimes been aroused from our sleep by a tropical downpour of rain, and remained restlessly awake the long night, hearing the ominous gurgling of the torrent endeavouring to enter the choked drains, hearing the lapping of the rising waters that encircled our imprisoned walls, till on the break of dawn we saw with dismay that our house was but an island engulfed in the flood. "Surely this is a second deluge!" we have exclaimed; but when the papers came in, we found it recorded there with cynical scientific precision that "it rained $1\frac{3}{4}$ inches last night." "Absurd," one of us must have cried out, "I measured

the mark of the water on the wall, and found it just 5 ft. 6 inches !" Here then we committed a grievous blunder, for the water might have stood 5 ft. 6 inches in the streets and our back-gardens, because it was shut out from the places occupied by buildings and other eminences, but had these latter been levelled and the whole ground perfectly open and horizontal, then the same quantity of rain would have stood only $1\frac{3}{4}$ inches deep, *but would have covered every square inch of ground.* Similarly, silver has been shut out from half the commercial world since 1873 by an artificial embankment, and in consequence being compelled to stand in a limited space its level has risen to 30 : 1. But break down this artificial embankment and open out the whole field, and monometallists will see that the level of silver will come down by half to about $15\frac{1}{2}$: 1.

WILL THE FIXED RATIO ALWAYS REMAIN THE SAME ?

Having then made the fixed ratio $15\frac{1}{2}$: 1, monometallists are inclined to object that since the yearly output of silver from mines is far greater than the yearly output of gold, this will no longer be the *natural* ratio in a very few years. In answer to this objection bimetallists may aver that

(1) the yearly output of silver from mines is *not* greater than the yearly output of gold proportionately to this ratio ;

(2) even if it were so, there is a far greater use for silver in the industrial arts than for gold, hence the annual output of silver left for currency purposes will not be greater than that of gold proportionately to this ratio ;

(3) even granting for the sake of argument that the annual output of silver left for currency may be proportionately greater than that of gold, it will not affect the ratio for a very long period, because this matter is governed not by the annual supply but by the total stock of each metal actually in existence.

Let us discuss each point separately.

(1) The output of silver from all the mines of the world during the last two years has been approximately 200

million oz., whereas that of gold has been about 16 million oz. This gives us a ratio of $\frac{200}{16}$: 1, or $12\frac{1}{2}$: 1 ; hence the supply of silver from the mines during the last two years has been very much less than $15\frac{1}{2}$ times that of gold. Moreover according to the calculations of the very best authority on the matter, M. Leroy-Beaulieu, the estimated output of gold for this year is about 10 million oz., and according to the same authority there is every possibility of a still further increase in coming years. Of course this is due to the enormous find of gold in the South African mines recently, which are likely to yield even more with a greater development of mining operations. It must be noted that if 10 million oz. be the output of gold this year, that of silver should be 155 million oz. to be in keeping with the ratio of $15\frac{1}{2}$: 1. But there is no possibility of such a large quantity of silver being produced this year, especially if we remember that, since the closing of the Indian Mints, more than half the silver mines of the world have been abandoned, and that it is very difficult to re-open operations in abandoned mines (which are naturally the deepest ones) owing to the accumulation of water and the rotting of the machinery. Hence I am compelled to say that this supposed fear of over-production of silver, which monometallists hold out, is all a myth.

(2) Even if this fear were based upon facts, even if the actual annual output of silver from mines were proportionately greater than that of gold, yet the quantity ultimately left for the purposes of currency would not be out of proportion, because the uses of silver in the industrial arts are far greater than that of gold. This is obvious to all, that apart from the silver plates of the rich, almost every household must have a certain quantity of silver articles which are simply indispensable to the barest comforts of life. Nay, the rich and fashionable world has even abandoned the use of gold as jewellery, and taken to silver, as blending more harmoniously with diamonds. If we desire to know more, we have only to ask any scientist, and he will tell us that silver is immeasurably superior to gold from his point of view, that it is a better conductor of heat and electricity, a better reflector of heat and light, etc.

(3) Even granting for the sake of argument that the annual output of silver ultimately left for purposes of currency may be proportionately greater than that of gold, it will not affect the ratio for a very long time, because this matter is governed not by the annual supply but by the total stock of each metal actually in existence. Let us illustrate this point mathematically. As already stated the approximate quantity of gold at present in existence is 242 million oz., and that of silver 3700 million oz. The output of gold from mines last year was about $8\frac{1}{2}$ million oz., whereas 144 million oz. is about the greatest annual output of silver that can ever be reached again. Now let us grant that this high rate of silver production shall again be attained and maintained throughout for the future, and the rate of gold shall never be increased ; also let us grant that these metals shall never more be used for the industrial arts, but shall be employed solely to swell the currency of the world. Then even under these extraordinary and impossible circumstances it would require just $21\frac{1}{2}$ years for the total quantity of silver in the world to be only 16 times the total quantity of gold, instead of 15·29 times as at present.* Now I have already said more than once, but I repeat again, that such is the admirable power of the compensatory action of bimetallism, that *the fixed ratio need not coincide with the natural ratio*, so long as it is not too widely different. It has already been said (Page 5) that during the 16th century the annual production of silver increased nine-fold from £425,000 to £3,700,000, whereas that of gold increased by only $\frac{1}{4}$, that is, from £800,000 to £1,000,000 ; and yet in spite of this enormous difference the bimetallic ratio was changed after one century from 11 : 1 to 12 : 1 only, such was the effect of the compensatory action.

Finally, let us grant for the sake of argument almost everything to monometallists, that not only will those improbable conditions mentioned above will be actual and real, but that we must have the fixed ratio almost identical with the natural ratio, compensatory action or no compensatory action. Well then we say, "change the ratio after 21 years to 16 : 1" *if* all the above conditions happen to be fulfilled.

* For, $3700+(144\times21\frac{1}{2})=16\{242+(8\frac{1}{2}\times21\frac{1}{2})\}$.

Surely it is impolitic to continue to suffer a present and actual loss simply for fear of a *possible* bother of a change a generation hence. If it were not so, we may arrive by parallel reasoning to the absurd conclusion that *every* government loan, even when raised to avert an impending evil, is unjust and impolitic simply because it casts on posterity the burden of redeeming the debt or paying its annual interest.

WILL NATIONS AGREE TO INTERNATIONAL BIMETALLISM ?

Perhaps the final objection raised by monometallists, and that on practical grounds, is that nations will not agree to have International Bimetallism. Let us see, however, if this be the case. The Latin League at any rate will be too glad to have it, since that union has not even been dissolved, but only suspended, owing to the conduct of Germany in demonetizing silver ; and the French Government has spoken very strongly on the matter only a few weeks ago. The United States have more than once shown their desire to have bimetallism, especially as there is a large silver party there which may even compel the States to adopt bimetallism independently of all other nations. It may also be remembered that the International Monetary Conference held at Brussels in 1892 was brought about at the invitation of the President of the United States. The Indian Government will jump at the opportunity of having international bimetallism, even as a drowning man clutches at a straw.*

* It is worth while combating an argument that is sometimes brought forward, viz. that the present depreciation of silver is really to the advantage of India, because it acts as a kind of protection to some industries, *e. g.* cotton, paper, etc. But at what a cost! Are not the terrible taxation, the appropriation of the Famine Fund, etc., caused by the ever-increasing burden of the Home Charges, a sufficient set-off against any such supposed advantage? Again, does this protection benefit the Indian people, the consumers of these commodities? Not much, I should say. Finally, granting for the sake of argument that this protection *is* beneficial, we ask how long is it to be maintained? The only admissible case of protection according to Mill is that of an infant industry, which however *will soon be able to stand on its own legs*. Well, if these industries cannot stand on their own legs after twenty years of propping up, they never will. If a child cannot walk after five years of help from its mother, there is small chance of its ever doing so by itself.

Austria is repenting for her late foolish attempt to establish a gold standard, and will now be too happy to retract. Finally we come to the most ominous sign of all. Let those who can interpret the writing on the wall, read the doom of monometallism. Germany was the root of the present evil, and now she too has realized the folly of her suicidal policy in demonetizing silver in 1873. On the 17th of February last a resolution was passed in the German Reichstag convening an International Monetary Conference. During the debate it was shown that the ablest men in Germany, led by Count Mirbach, are decidedly in favour of bimetallism. Can England then hold aloof, and continue to play the dog in the manger? I do not think so, for she will be drawn into it by the attraction of so powerful a combination of economic forces. That she will be strong enough by herself to withstand the effects of such an amalgamation, is all moonshine; in fact the United States alone by the Sherman Act of 1890 were able to send up the Rupee from 1*s.* 4½*d.* to 1*s.* 8*d.* So then it is advisable for England to join gracefully. Times have changed happily since 1892 when if I mistake not, Sir H. Meysey-Thompson in opening the Bimetallic Debate in the House of Commons exclaimed in despair that "he knew the hopelessness of attempting to explain what Bimetallism was even to intelligent Englishmen!" The cause of Bimetallism has progressed in England with giant strides since that time—especially as men of such opposite political minds as Archbishop Walsh and Mr. Balfour have become its most enthusiastic adherents. Mr. Everett's resolution passed in the House of Commons a few weeks ago to join the Conference, has shown that there is a large and growing body of men in England who are in favour of international bimetallism. And well they might be, if they have seen the truly appalling state of trade in England at present. The surest proof that this is no idle alarm lies in the fact that perhaps never before has the Bank rate in England been so continuously low, or the Bank of England reserve so high. This of course shows the little need there is for English capital, hence it proves that there *is* a stagnation of trade.

WILL NATIONS AGREE AS TO WHAT THE FIXED RATIO WILL BE?

I have already said that the particular point at which the ratio is to be fixed is of little importance, that in fact any ratio is better than none. Hence it seems that no nation will have any interest in absolutely opposing the ratio voted by the majority. No doubt mutual concessions will have to be made in settling this question, but to suppose that civilized nations are too pugnacious to settle this point amicably is to deny the *raison d'être* of modern arbitration, and consequently to libel the civilization of the world.

HOW IS THE NEW LAW TO COME INTO OPERATION?

As most medicines are nasty to take, and most cures are painful at first, especially when the disease has been allowed to go too far, so the initial task of bringing the fixed ratio into operation will give a little trouble at first, because the present artificial ratio of 30 : 1 has been allowed to drift too far from the natural ratio of 15½ : 1. But we cannot mind the cost when the advantage to follow is so great. And to suppose that this task will be beyond human power is to ignore the existence of intellects which have discovered all about the planet Neptune without even seeing it, and have paid an enormous war indemnity of £200,000,000 without upsetting the financial equilibrium of the world. The simplest plan then is to bring about the desired ratio *gradually.* I cannot do better than quote Mr. Robert Barclay's suggestions from his admirable work on "*The Disturbance in the Standard of Value.*" Supposing it is desired to have the fixed ratio 15½ : 1, then the operations are to be accomplished in five successive steps spread over four years. "The ratio would be first fixed say at 20 : 1 to begin with, but no coining of silver under the arrangements of the Convention to take place until the successive steps over the four years, which would bring the rate to 15½ : 1, were completed. One year after the fixing of 20 : 1, the ratio would be lowered to 19 : 1,

Two years after to 18 : 1,
Three ,, ,, ,, 17 : 1,
Four ,, ,, ,, 15½ : 1.

During this transition period, anyone bringing silver in any form to the mints of the contracting Powers would get it melted into bars of the fineness prescribed by the Convention, and would receive, in the case of England, through the Bank of England, legal tender notes, not ear marked, for the value of their bars at the ratio ruling for the year. It would be arranged also for this transition period, that anyone wanting silver bars for any purpose could demand them at the mints by paying for them in legal tender money at the ratio ruling for the year, as long as the mints could supply them.

"The Bank would simply act as the agent of the Government, which would indemnify it or take the profit that would accrue as the system went on to completion. Silver would already in this way be taking its part in the general basis of our legal tender money."

CONCLUSION.

In laying down my pen I cannot help making a few remarks concerning the International Monetary Conference that is about to be convened. Delegates will be sent by all the nations of the world to form the most significant Court of Arbitration in the annals of history, to settle the most momentous question of modern times; for I cannot help hoping that if they come to a final and tangible result, they will show the world that the true interest of mankind lies in unity of action, that the great prize must be won by industry and not by the force of arms. That an amicable settlement of this question will inaugurate an era of peace, will lead to a general disarmament in Europe, and consequently to an increase of industry, and prosperity, and happiness, is not an idle dream. She, on whose action will depend much, and who may snatch away at pleasure the prize of so glorious an enterprise, is England. The position taken up by her delegates will be watched with deep anxiety by the whole Congress, and the minor nations may follow her footsteps blindly. But her conduct so far has been selfish and unrighteous. England allowed the whole burden of maintaining the financial equilibrium of the world till 1873 to fall on France. And most nobly did France fulfil her task,

while England profited to the utmost without so much as moving her little finger to help her. But now let England redeem her past, and take the lead in the coming Conference. It is the irony of fate that she who has been the mother of every free institution, of modern industry and commerce, and the foundress of economic science, should reveal such prejudice and ignorance regarding the science of Bimetallism. If however notwithstanding every entreaty she proves false to her own and the world's interest, and to her great name, then she may learn to her cost that other nations can act without her, and in retribution may see stagnation bring ruin to her industries at home, and may see her foreign commerce shut out from the rest of the world by an iron barrier of tariffs. Let her then choose between the two. If she still persist in following a policy of isolation, of inactivity, and of hopeless drift, will she not at any rate permit the Indian Government to act freely in the matter, to free itself from a cruel embarrassment by entering into an arrangement with other nations to adopt International Bimetallism?

APPENDIX.

THE INDEX-NUMBER AND THE TABULAR STANDARD.

Let us suppose that you lend me to-day £100, payable in 1 year, with an interest of 5 per cent. Then at the end of 12 months I should give you £105 to cancel my debt. But when I promise to give you £105 at a future date, do I really mean to hand over 105 pieces of gold? No, what I promise to give you is the purchasing power over commodities in general, at this moment represented by £105—in other words, say 10 quarters of wheat, 2 tons of coal, 1 cwt. of meat, 2 pairs of shoes, 10 yards of woollen-cloth, etc.—for 105 pieces of gold in themselves cannot be of any use to you, except perhaps to hang around the neck, or better still, to pelt crows with! If in the meantime however money become scarce, and therefore if general prices fall, then £105 will not represent the above items, but something more, say 12 quarters of wheat, 3 tons of coal, 1½ cwt. of meat, 3 pairs of shoes, 12 yards of woollen-cloth, etc. Hence if I were to give you £105, I should pay more than I promised, and consequently you would gain at my expense. On the other hand, if money become plentiful, and therefore if things in general become dearer, £105 will represent some such items as 8 quarters of wheat, 1 ton of coal, etc. Hence by giving you £105, I really pay less than I promised, and consequently gain at your expense. So it would seem that the present system of deferred payment is simply a wagering on the rise or fall of general prices. To remedy this evil it has been proposed to establish a **Tabular Standard** of deferred payment. I shall describe the plan as actually stated by the *Economist* of London. Twenty-two articles are chosen which (1) are in general demand, (2) are important to general prosperity, (3) are as much as possible independent of one another as to fluctuations of value, so that the variations of some of them may largely neutralize those of others. A certain quantity of each of these, according to their usefulness, is chosen as a unit, and at the commencement of the system the price of every unit is represented by 100, so that the price of the whole

system is represented by 2200. This is called the Index Number. At a fixed interval, say once a fortnight, a fresh valuation is taken, so that if the price of a certain commodity has fallen 5 per cent. in the meantime, its representative number will be 95; on the other hand if the price of some other commodity has gone up 7 per cent., its representative number will be 107, and so on for all the commodities. The new Index Number, which is the sum total of all these, will show that prices in general have risen since the last valuation if it stands above 2200, or fallen if below that number. In this way we may find a series of Index Numbers and thus compare the fluctuations of general prices for any length of time we please.* Now these tables will afford us a most equitable system of deferred payments. For, if I promise to pay you £22 at the end of 6 months, and within that period the Index Number rises from 2200 to 2400, then I should pay you more proportionately, that is, £24. On the other hand if it falls to 2000, then I should give you £20—and so on the increase or decrease in the amount being proportionate to the rise or fall in the Index Number between the time of making the promise and that of payment.

* Of course this is not at all a perfect method, and may easily be improved upon; but it is good enough for the present purpose.

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